

On a new species of *Calotermes* (*Cal. tectonae* nov. sp.) which attacks living teak trees

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With pl. 3 and 4.

The forest service of Java called our attention on a peculiar disease of teak trees (*Tectona grandis*), which was caused by white ants.

On trees averaging from 20—30 years in a teak plantation at Kedoeng-Djati near Samarang local swellings were found at a height of about 3—6 M. Inside these swellings a species of *Calotermes* was found, which proved to be a new one¹⁾. The species resembles *Calotermes assmuthi* HOLMGR., which is found in India. In the succeeding pages a description of the species & its life history will be found.

***Calotermes tectonae* nov. spec.**

Imago. Length 8—10 mm, upperside of the body chestnut brown, head dark brown, eyes black, lower surface, antennae & legs yellow brown.

The ocelli lie quite close to the eyes, the antennae have 18—19 joints. The pronotum has the same breadth as the head and is more than twice as broad as it is long and the corners are roundish.

The legs are short, the tibiae possess on their extremities three strong thorns, the onychium is well developed. The front margin of the wings is straight. The radius of the forewings is connected by many cross veins with the costalis,

¹⁾ This was also confirmed by Prof. HOLMGREN of Stockholm.

the medianus runs parallel with the radius and between both are many cross veins. (Pl. 3, fig. 1).

On the posterior wings the radius and medianus are partially coalesced, there are many cross veinlets between them and the costalis. (Pl. 3, fig. 2).

Soldier. Length 10—12 mm, head with the mandibles 4 mm. Body yellow white, head chestnut brown, mandibles black and brown on its base.

The head is big, oblong and rectangular, comparatively thick and parallel sided, the front flattened towards the mandibles (Pl. 3, fig. 3).

The mandibles are comparatively long, the right one with two big teeth and a small one, the left with six small teeth.

The eyes are small, round, light spots, situated above the base of the antennae. The antennae have 15 joints, the 3rd joint is more brown and bigger than the 2nd and 4th joint.

The pronotum is a little more broad than the head, three times as broad as long, the corners are roundish, the anterior and posterior sides are a little bend inward.

Legs short, posterior legs do not reach the end of the body, tibiae with three thorns on the end just as the imago.

Worker. Length 7—9 mM, body yellow white, head yellow. Pronotum a little smaller than the head, thrice as broad as long, anterior side a little concave.

LIFE HISTORY.

Till now this white ant has only been found on living teak trees. It lives inside the stem at a height of 3—6 M; on this spot the stem is swollen and the bark cracked. On the same tree one may find sometimes three or more swellings above each other. If we slit the wood we find several passages, which are partially covered with excrements (Pl. 4). The passages do not extend much further than the swollen part of the stem. Sometimes the passages of two swellings are connected, but they never run towards the base of the tree. The passages communicate with the air by narrow openings.

In the beginning the holes are obviously made between

the bark and wood, whereby peculiar deformations are formed, which are outwardly visible as swellings of the stem and are recognised by the bursting of the bark.

Later the passages are extended to the heart wood. So the white ants do not enter the tree from the base, but on the height where the swelling is found.

Towards the end of the dry monsoon all stages were found inside the stem, in the beginning of the rainy monsoon, November and December, the winged forms swarmed, later they were not found in the passages.

How the trees are attacked in the beginning is still uncertain, but in older passages pairs were found with shed wings and also was found experimentally that the larvae are capable of boring into the living wood.

Probably the males and females are received in already existing nests.

The damage caused by this pest is of great importance. On some places 75 % of the trees were infested.

The trees break off easily near the swellings and the value of the wood decreases considerably at the same time as it is impossible to make good timber of the infested trees.
